

PLANOGRAPHY
OF
J E R U S A L E M

BY
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MEMOIR
TO ACCOMPANY THE NEW GROUND-PLAN

OF THE
CITY OF JERUSALEM AND THE ENVIRONS

CONSTRUCTED ANEW BY C. W. M. VAN DE VELDE AFTER THE PLANS OF THE ENGINEERS ALDRICH
AND SYMONDS, AND OF DR. TOBLER.

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WITH A FACSIMILE OF THREE ANCIENT PLANS.  
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GOTHA: JUSTUS PERTHES.
LONDON: WILLIAMS & NORGATE, 14 HENRIETTA STREET, COVENT-GARDEN.
1858.

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A history of the plans of Jerusalem, which at the same time will afford materials for the history of art in general, must begin at an early date, if it is to comprise the first rudimentary delineations as well as the later very imperfect drawings that prevailed even beyond the fifteenth century*).

The most ancient ground-plan known to me belongs to the seventh century. The French pilgrim *Arculf*, on his return from Jerusalem, being driven upon the British coast at Jona, dictated a narrative of what he had seen and experienced during his voyage to the abbot *Adamnan*, and in order to render his representations still more exact, *Arculf* himself drew plans on small wax tablets. The plan found**) in Cod. Ratisbon. civ. 2 in the royal state-library at Munich is not large. The base of the city-wall in south and west is straight, forming an angle in southwest and northwest, but the battlement of the western wall is curved, while that of the south is, as it were, winding; on the northern side it forms a curve, and on the eastern side the line is broken for the introduction of a gateway. In southwest the tower, as being a citadel, seems to be surrounded by a wall of its own. Elevation was added to the ground-plan. Thus all the gates, with the exception of the gate of St. Stephen, are represented with two wings, and also several towers besides the one in southwest are represented in this manner. A pillar, seemingly issuing from the western wall of the city and stretching directly eastwards far beyond the middle of the latter, bears a cross, above which is a half-figure of Christ. On the western side towards the southwestern angle is written „Porta I. David”, towards the northwest angle „Porta II. villæ fullonis”, in the neighbourhood of this a little to the east „Porta III. S. Stephani”, on the eastern side furthest north „Porta IV. Benjamin”, furthest south „Porta VI. Thecuitis”, and between the two latter „Porta parvula. ab hac per gradus ad vallem Josaphat descenditur”.

A very interesting plan of the city with a map of the surrounding country to a considerable distance previous to the year 1187, when *Salâh ed-Dîn* extended his conquests into the heart of the country***), has descended to us from the time of the crusaders. In this also elevation

*) Compare the sketch of the plans in my „Topographie von Jerusalem”, 1, XCII ff. See also *Crome* in *Ersch's and Gruber's* „Allgemeine Encyclopädie der Wissenschaften und Künste”, Art. Jerusalem 274^b. The view given in *George Williams's* Historical and Descriptive Memoir to accompany the Ordnance Survey, is not sufficiently comprehensive.

**) See appendix I for a copy of which I am indebted to the artistic hand of a friend.

***) The „Terra Sancta et Jerusalem ad usum peregrinorum” after a manuscript from the 12th century (*Robert. Clarimont. de Hierosol. occupatione et Fulcher. Carnot. gesta peregr.*) in the library at Brussels is given in *J. Lelewel's* Atlas to his „Géographie du Moyen-âge” (Brussels 1853) and has been pretty faithfully copied after this, but not coloured in *Édouard Charton's* „Voyageurs Anciens et Modernes.” Paris 1855. tom. 2, p. 179. See appendix II.

has been added to the ground-plan. In drawing the city walls *Arculf*, no doubt, followed nature more or less accurately, but in this later plan the walls are drawn much more arbitrarily, the lines forming quite a circle. The elevation shows four superincumbent layers of stone in the city walls, and the walls are crowned with battlements. From this ring-wall run four streets which meet at right angles in the centre of the city, so that they form a southwestern, a northwestern, a northeastern and a southeastern quarter, all of equal dimensions. In the southwestern quarter we see first of all the tower of David (*turris David*), a tall edifice which adjoins the „platea David”*), and in the middle the latin church of Mary (*ecclesia*

*) For the better understanding of this description, I would refer the reader to my plan of Jerusalem as it was at the period of the crusades, appended to the work: „Siloahquelle und Ölberg”. I have only to deplore that, at the time of drawing this plan, I was not yet acquainted with the three codices in Bern, which contain the description of the „Citez de Jerusalem” drawn by *Hugo Plagon*; for the latter, as given in my edition (*Topographie von Jerusalem* 2, 984 ff.), are distinguished by important explanations, corrections and additions. Following these I ought for instance to have drawn the „praetorium (novum)” not south of the „ruga Josaphat”, but to the north, south of the „Juerie” (not Merie). I feel the more justified in thus drawing attention, *in the interest of the subject*, to my edition, because even as late as last year but a Mr. *E. Robinson* appended to his new edition of the „Biblical Researches” (vol. II, app. II, p. 556 sqq.) the by no means correct edition of *Beugnot*, and the authority of the American might lead others likewise to overlook my edition and to commit similar errors. Treating my edition as non-existent *Robinson* writes as follows regarding the *Portes doulereuses*: „The ground of this appellation is unknown” (Later Biblical Researches in Palestine. London 1856. p. 170), while my edition (1000) exactly supplies this supposed want of foundation for the name: „Par la (porte doulereuse) issi fors Jesus, quand on le mena el Mont de Cauvaire pour crucifier et pour qu'on l'appelle porte doulereuse.” In the German translation, however, this passage has been added as a correction, but probably not at the suggestion of *Dr. Robinson*. An other error of which he has rendered himself guilty, partly because of his having overlooked the edition of *Plagon* published by me, has reference to the *Via dolorosa*, which appellation, he asserts, was unknown to the crusaders, accompanying his assertion with the explanatory words that the present *Via dolorosa* was called by the crusaders partly „la rue del Sepucure”, partly „la rue de Josaphas” (*ruga Josaphat*). But the question is not as to how the ancient pilgrims denominated parts of the present *Via dolorosa*, but rather as to what they knew and how they denominated what they knew, having reference to the subject. According to *Plagon* they knew 1) the house of Pilate on the north side of the *Josaphat* street, and 2) on the south side of the same street and more to the west they knew the church of the Rest where Jesus rested when he was led away to be crucified. They knew 3) a street of Rest (*vicius de repoes*), and as this street must necessarily have issued from *Josaphat* street, what other could it have been than the one that leads from the present *Ecce-homo*-arch southwards in the direction of the northwest angle of the area of the „templum Domini”, and that lay nearest the church of the Rest? The crusaders knew 4) a gate of Sorrow which *Robinson* (171) following the vacillating precedent of *Schultz*, identifies with the above mentioned arch. The ground for the name of the gate is as well known as that of the name by which the church of the Rest is designated. Besides the situation of this gate was so minutely described, that an unbiased investigator can hardly mistake it. Going, so says the text, from the St. Stephens gate on the left a certain distance along the street leading to the Tanner gate, you came to *Josaphat*'s street on the left, and if you went a *little further still* (southwards or towards the Tanner gate) you came to a cross-street (*carrefour*). One part of this intersecting street running east and west, which formed the cross, came from the temple (the area of the *Templum Domini*); and the other led to the Sepulchre (*ecclesia s. Sepulchri*). At the top, or the beginning of that (eastern) part of the cross-street in the direction of the Temple (of the Lord), stood the gate of Sorrow. In the present day if you go from the west end of the old *Josaphat* street southwards towards the temple bridge („le pont” as *Plagon* says), along the valley (*el-Wäd*), you will find, it is true, on your left hand a street descending from the northwest angle of the Temple area, before you arrive at the „tarik el-âlâm”, but there you look in vain for a cross-street, which appears, however, further southwards, where the „hâret el-tekiyeh” opens into the „wäd”, altho' *Robinson* (*Kiepert*) in his newest plan indicates no cross-road here. If we place the gate of Sorrow at the top of the street which runs from the northwest angle of the temple area westwards into the wäd, the expression *devers le temple*, indicating the position, would have been at the same time less applicable. The crusaders also knew 5) in the quadrivium on the right [or in the west, here in the street leading from the gate of Stephen to the Tanner gate] „li ruisaus”, which Jesus passed on his way to execution. We have thus followed the *Via dolorosa* of the later crusaders at least — tho' *Robinson* asserts (170, Boston Edition 1856. I. 233.) that *Marino Sanudo* was the first who mentioned the legendary localities along the road which did not then as yet bear the name of *Via dolorosa* — from the house of Pilate in *Josaphat* street, past the church of the Rest through the street of Rest, thence, in the temple area, as far as the gate of Sorrow, then from this latter place in the direction of the church of the Resurrection to a transitional point in the valley [the street that leads from Stephen's gate to the Tanner gate]. From this point the further direction through the present „hâret el-tekiyeh” and the ancient „ruha palmariorum” to the southern parvis of the church of the sepulchre, is self-evident. The result we have attained is a *Via*

latina), which ought, however, to have been placed north of David's street. In the northwestern section, close by the side of the David's gate, appears the Sepulchre of the Lord, that^t is to say in written words (*sepulchrum Domini*), within an enclosing ring-wall with a double gate towards the south and another towards the northeast, with three contiguous carved lines above a cross. Immediately northeast of this in an irregular square, and under three small arcs, is written „*lapis salsus*” (not *salutis* or *salvatoris*) which I do not quite understand, and which ought probably to be corrected so as to mean anointment-stone. Above this stand two high gateway-arches with the word „*Golgotha*” inscribed at the side, and the word „*Calvariæ*” above. This quarter is separated by the street of the gate of St. Stephen (*vicus portæ s. Stephani*) from the northeastern quarter, which is intersected by two streets, the one marked „*vicus ad portam Josaphat*” running from west to east, the other „*iter ad portam speciosam*” cutting it at right angles in the direction north and south, and ending in two gateway-arches. In the small section between the latter street, the town-wall and Josaphat street, is a *piscina*, north of St. Anne's Church (*templum s. Annæ*), which is the pool discovered by the crusaders. East of the last named two arches we observe a circular building with doors in south, east, north and west; this is the *templum Domini* (at present „*kubbet es-Sakhrâh*”), and west of these arches, reaching up to Stephens street, is the bank of exchange (*cambium monetæ*). Mount Sion gate street (*vicus portæ montis Sion*) being a continuation of the last named street, separates the southwest quarter from the southeast. Through the latter runs an unnamed street in the same direction, north and south, as the one marked „*iter ad portam speciosam*”, and parallel with mount Sion street, the northern part being in like manner parallel with Stephen's street. In the northwest angle of this quarter is the market-place (*forum rerum venalium*); eastwards, adjoining the unnamed street, is „*Salomonis claustrum*”, by which I understand the dwellings of the knights Templar, and somewhat further east is the „*templum Salomonis*”. The town-wall numbers five gateways, all with double gates, viz. *porta David occidentalis*, *porta s. Stephani septentrionalis*, *porta Josaphat orientalis*, *porta Sion australis*, and between the two latter an unnamed gateway situated opposite the temple of Solomon. At the David's gate the street divides into three pathways, into the „*vicus ad civitatem*” from „*En-Neby Samwîl*” (*Mons gaudii*), into a middle road, and into the „*vicus ad Bethlehem*”, which is seen together with the word „*presepe*”. If we move round the city from David's gate, first in the direction from north to south, we come first of all to the grave of Rachel (*sepulcrum Rachelis*), next to the pool of Siloam (*fons Siloe*), from which a brooklet flows a very little way down as far as under the

dolorosa quite different from the one of the present day, and also necessarily differing essentially from the ancient one as, according to the unanimous testimony of pilgrims, the house of Pilate was supposed to be situated on Sion south of the Sion gate, which result I consider as valid even in spite of the objection that the ground-plans from the time of the kingdom of Jerusalem offer no points of correspondence, with the exception of the somewhat problematical gate of Judgement. I regret to have to repeat what has already, in a great measure, been said elsewhere, and can only plead in excuse my desire to disprove as fully as possible errors which have of late been again put forward with a certain appearance of authority.

Sion gate; then to the „coenaculum” on Mount Sion (Mons Sion), represented as a large building with high domes; and then further eastwards to a ring containing the word „Akhel-demakh” and with an inscription above indicating that the burial place of the pilgrims (sepultura peregrinorum) is situated here. Beginning from „Bethania”, we find „Hierico, locus vl” or more correctly xl i. e. quarantena (which is besides given as a *duplum* on the left of the Jordan with the places marked where the Lord fasted, and where he was tempted by the Devil) and Nazareth so mixed up with each other that they are not worthy of further notice. The „Torrens Cedron” flows in the form of a powerful stream southwards from the valley of Josaphat (vallis Josaphat). In the latter we find the tomb of the holy Virgin (Sepulchrum s. Mariæ) and her church (ecclesia s. Mariæ), above which theré is the Mount of Olives (Mons Oliveti), on the summit of which is drawn a church in the form of a rotunda with a cross, indicating the spot whence the Lord ascended into heaven (ascensio Domini). Outside of the gate of Stephen a basilica, denominated templum s. Stephani, surprises the eye by its beauty. This plan from the time of the crusaders, the first in which an attempt has been made to indicate the network of streets, marks a considerable advance in planography, and indeed, I am bound to bear witness to the fact that the light from these times brought to bear upon topographical subjects is much greater than the world in general has hitherto been inclined to acknowledge. This fact can not surprise us, if we take into consideration that the Saracens, who had attained to a pretty considerable height in civilization, must have exercised a stimulating influence on the Franks and promoted enlightenment among them.

Another quite similar plan*) dates its origin from about the same period of the crusades. The outlines of the city, but without any part of the surrounding country with exception of the „ualles iosaphat”, are likewise circular and divided into four equal sections; but the objects represented, for instance the „templum Domini”, which are however nothing more than creations of the imagination, are very different. In the southwestern quarter we read „ecclesia latina”; above this „porte natris (? veteris) vel Iudiciaria”, below „turris davits” (Davidis); in the northwest quarter, low down „templum sancte crucis”, in the middle to the left „sepulcrum ade” (Adam’s), „sepulcrum domini”, further up „porta gregis vel probatice piscine”, still further east „Golotha” (Golgotha), on the right side of this „lapis salus” or „salsus” and still further to the right, further towards the middle of the area, in an elliptical ring „caluarie locus”. These two quarters are divided from the others, on the north by the „uicus porte Stephani” and on the south by the „uicus porte montis syon”. In the southeastern quarter, proceeding from west to east, we find following one after the other „habitacio regis et prophetarum”, „habitacio ciuium vel propharami” (? pro Francis? profani?), „claustra salamonis”, „templum salomonis”; in the northeast quarter „iter habitancium”, „templum st^e marie” (instead of s. Annæ), „templum

*) „Jorsala. Borg.” E membrana Islandorum saeculi XIII., also given in *Lelewel’s Atlas*.

domini". The gateways are also specially marked: „porte piscium vel Davidis", „porte uallis iosaphat", on the southeast side „porta aurea, per quam ingressus Ihesus super asinam". It is sufficiently evident from this, that this plan is more simple and that the text is not a copy of the other ground-plan, the manuscript of which dates from an earlier period. To come back to the porta judiciaria (the gate of justice), it might be supposed that in early times tradition placed this gate further south in the city, in accordance with the then prevailing opinion that the via dolorosa commenced on Sion, outside the porta Montis Sion, if the „ecclesia latina" had not also been pushed into a wrong place, probably for no other reason than that the southwest quarter afforded a more convenient place for the picture of this church.

It was towards the close of the dominion of the Franks in the Holy Land, that the meritorious Venetian *Marino Sanudo Torsello* endeavouring to attract attention very forcibly to the reconquest of the parts already lost, devoted himself also to the study of the topography of the country, and as a fruit of these studies we have his plan of Jerusalem*). A glance at this suffices to show what great progress in planography had been made in about a century and a half. The outline of the plan of Marino Sanudo is no longer a circle drawn arbitrarily, but in all essential points corresponds with the reality. I would point out, for instance, the projecting angle of the city wall close to the mosque of Aksa, the northwestern direction beginning from the Yâfa gate, the northeastern direction as far as the Damascus gate, the eastern up to the northeast angle of the city, and the southern up to the southeast angle. Altho' no street is named, the network of streets is nevertheless more complete. It is not difficult to find the great street which leads from the Yâfa gate eastward towards the temple-area, the vaults of the bazaar, the „hâret en-Nassâra", the „hâret el-Khânkeh", the „hâret deir el-Franj", the „hâret el-Tekîyeh", the street which leads southward from Stephen's gate towards Sion, the „tarîk Sitti Mariam", the „Wâd", the street which runs through the Barbaresque quarter to the Dung-gate and beyond it. Many of the most note-worthy objects are indicated, such as the tower of David, the sepulchre of the Lord, the site of the spasm of the Virgin, the house of Pilate to the north of the old Josaphat street, just as according to the codex of Bern, it is already indicated in *Hugo Plagon's* „Citez de Jerusalem", the „Piscina interior" north of St. Anna, the temple area, the mosque of Aksa, and, strange to say, also the Coenaculum at the side of the „Hic virgo migravit" in southwest, within the city. Outside the city, special interest attaches to a „Fons Sion", situated at a short distance opposite the tower of David, and which Hiskiah covered up, having however previously led the water to the tower of David and into the inner pool close by St. Anna; the „Piscina superior" (the present „birket es-Sultân), the „fons Gion inferior", south of this pool, the „Piscina inferior" situated in the valley of Hinnom (here for the first time drawn upon a plan) above the point where the latter

*) Appended to the „Liber selectorum fidelium crucis". *Orientalis historix* tom. II. by *Marinus Sanutus*, and copied in appendix III. of the present work.

opens into the valley of Kedron, the swimming pool of Siloam southeast of the Dung-gate, the fountain of Siloam a little north of the pool, Mount Sion (according to Christian tradition the mount of Offence) and several remarkable sites, such as that of the tree that Jesus cursed, and more particularly that of Christ's agony and of the betrayal in Gethsemane.

A well executed pen and ink drawing from the last decennium of the fifteenth century preserved in the royal state-library at Munich („cod. iconograph.” 172) and stated to be from the hand of a fellow pilgrim of the Nüremberger Hans Tucher, by name *Sebald Rieter*, presents us with a bird's-eye-view of the city of Jerusalem and its precincts on a very large scale. This work, which is, no doubt, a true mirror of the culture of the Western nations of the fifteenth century, is, considered as a plan, inferior to the productions of Marino Sanudo. On the drawing of the elevated buildings some degree of carefulness has indeed been expended, but the text on the contrary is a barbaric mixture of Italian and Latin, which is in some places hardly comprehensible. The artist has been less intent upon leaving to posterity a true topographical image, than upon presenting the whole treasure of traditions to the pilgrims, who passionately craved for them. A whole series of traditions have thus been fixedly localized for the first time; the site of the lapidation outside the east-gate, of which it is said: „Hic ex ista porta duxerunt s. Stephanum quando Judæi voluerunt eum lapidare”, the „Fons Sta. Maria”, the fountain with the water of which Christ restored a blind man's sight; the place where Peter wept, and other sites on Sion, such as they were recorded in the fifteenth century and have been made sufficiently known elsewhere. I will only further notice, in the interior of the city, the „Hospitium paganorum”, by which is perhaps meant the old hospice of the knights of St. John, but which may also be a hostel situated further east.

We now enter the sixteenth century, during which we have to record no inconsiderable progress. In the first quarter of that century, a small book of pilgrimage by the Franciscan monk *Noë*, entitled „Viaggio da Venetia al Santo Sepolcro”, of which several editions were brought out, had a very wide circulation, which continued even in the last century. In this little book which is exceedingly rich in woodcuts, one naturally expects to find a superior plan also; but all that is obtained is a partial view of the city of Jerusalem taken from the Mount of Olives, and representing objects that could not in reality be discovered by the eye from this point. The first improved plan is from the hand of the Franciscan *Antonio de Angelis**), who was elected in 1579 to be guardian of Mount Sion. His „topographica delineatio civitatis Jerusalem”, appeared in Rome a year previous to his election. Not only the outlines of the city are given here pretty correctly, but an attempt has been made for the first time to give

*) I have hoped in vain to be able to meet with the first improved plan in the *Liber de perenni cultu Terrae Sanctae, et de fructuosa ejus Peregrinatione: Auctore Fr. Bonifacio Stephano Ragusino* (Venetiis 1573. 12.). After searching a long time in vain, even in the principal public libraries in Paris, I was indeed so fortunate at last as to find the little devotional book of the pilgrim, containing few but important topographical notices, in the library of Count *de l'Escalopier*, but unluckily I found in it neither plans nor views.

a plan of the ground. The direction of the valley of Kedron, to the lower part of which as well as to the lower course of the valley of Hinnom, De Angelis attributes the name of „Vallis Siloah”, and the direction of this ravine, more particularly that of the Wâdy en-Nâr in the neighbourhood of the well of Job (Nehemiah), here erroneously denominated „Vallis Ben Hinnom”, is such as to leave little to be desired. There can be no doubt that regular measurements were made and that even compasses were used.

It was no more than right that the Franciscans should employ the leisure they enjoyed in some useful work, and as such we may certainly consider the drawing of a more correct ground-plan of the holy city, and we find indeed that several other minorites have followed in the steps of the guardian De Angelis, upon whose work they have based theirs. The production in this line of *Bernardino Amico* of Gallipoli, towards the close of the sixteenth century, is little more than a copy. Much more valuable is the plan drawn twenty years later by *Francesco Quaresmio*, also a Franciscan monk and afterwards (1627) guardian, altho' a great part of it must be looked upon as a work of imagination. No ground-plan will suffice to give a full representation of nature; if this is to be done, she must be represented in her plasticity together with the additions or alterations made by the hand of the bricklayer and carpenter, or by the artistic hand of man in general. Hence has arisen the connexion of the ground-plans with elevation, or the bird's-eye-view, and in this direction Quaresmio has done a great deal, more than his predecessors. A careful examination of his work proves that he aimed at a certain artistic perfection, at the solution of a problem to which much attention has been paid latterly, more especially in France. The bold, tho' sometimes false, delineations of the natural features of the ground, a very distinct and rather complete net-work of the principal streets, which are, however, sometimes misplaced or made to run in a wrong direction, the churches, mosques, and more especially the minarets, viz. the four minarets of Haram esh-Sherif, the one in the Jew-market-street, in the citadel, those in front of and behind the church of the Sepulchre, and one in the northeastern division, behind the so called palace of Herodes, all these attract the eye, yet do not quite satisfy it, not only because the parts connected with the ground-plan labour under various defects, but also because the views of the edifices have been left too much to the imagination. If an attempt be made in a bird's-eye-view to combine, as far as possible, a correct plan of the streets and natural features of the ground with a faithful representation of the edifices, it cannot indeed fail to produce a great effect. Quaresmio has, however, held the Christian traditions more particularly in view, and we must not, therefore, be surprised if we meet with colossal figures, such as Judas who is taller than the trunk of the tree on which he is hung, or as the Apostles who are witnessing the ascension of Christ, and who are taller than any house.

But I must once more return to the sixteenth century to glance at a plan which, chronologically, followed that of Antonio de Angelis. I mean the ground-plan of *John Zuallart*

of Ath. His draught of the city-walls coincides almost entirely with that of his predecessor; the streets of the city indicated by lines of dots, bear in their reticulated course a great resemblance to those of the present day. Everything is here clearly represented.

In the seventeenth century, to which belongs, as we know, the plan of Quaresmio, which was likewise copied by *Electus Zwinmer*, we meet with few productions of importance having reference to our subject. *Henry de Beauvau**) principally followed the plan of Amico. *Hans Jakob Amman*, a Swiss surgeon, whose plan is accompanied by a portrait surrounded with the inscription: Isach Bonamana, has given an unsuccessful imitation of Zuallart's ground-plan. Amman's plan was also adopted by *Jonas Korte*. The publication considered the most worthy of attention, was probably the rather large and good plan given in the work: „Voyage de Levant Fait par le commandement du Roy en l'année 1621, par le Sr. D. C.", the authorship of which is erroneously attributed to the Ambassador Des-Hayes, the true author being his equerry *Jacques du Castel*, who also travelled in 1604 with the French Ambassador de Breves. In this ground-plan to which, in my judgment, the one given by *Marin* as appendix to his History of *Saladin*, Sultan of Egypt and Syria (German edition, Zelle 1761. 2, 49), comes much nearer than does *Pillet's* copy, the „via dolorosa" is particularly well drawn. The retrogression of *Goujon* (1671) I will pass over in silence.

In the eighteenth century there was no lack of original works, could we but say also that they were good! It seems that people did not then, as in the previous century, rest satisfied with copies from the sixteenth century, yet they had not sufficient knowledge to enable them to substitute something better for what already existed. The plan of *Thomas Shaw* must be considered a perfect failure, altho', as far as I know, he was the first who provided his plan with a scale, which must not however be too confidently relied upon, and altho' he enjoyed the honour of being robbed by the otherwise well informed *Giovanni Mariti* in his „Istoria dello stato presente della Città di Gerusalemme" (translated into French by *Laorty-Hadji*, Paris 1853, but without a plan). More inferior still is *Jonas Korte's* own miserable workmanship. The attempt of *Richard Pococke*, however original it may look, hardly deserves notice, so arbitrarily wrong are the valleys (for instance the valley of Kedron) drawn, and the hills grouped and multiplied, tho' some praise might be due to the compass and the scale, if they could be deemed reliable. *D'Anville's* ground-plan, which created great sensation and was frequently made use of, is a copy from the work of Du Castel. Notwithstanding his independent researches, the celebrated *Niebuhr* did not in the least improve Planography. I have yet to mention two curiosities: Ἰχνογραφία τῆς Ἀγίας Πόλεως Ἰερουσαλήμ, in the description of this city by the patriarch *Chrysanthos Notara*, and the plan of *Fabbrone*. The former, which exceeds all others in size, gives evidence of Greek taste, altho' it is based upon the

*) Iournaliere du voyage du Levant. Nancy 1619. 4. p. 118.

work of a Franciscan monk. This Greek plan is, however, in every respect greatly inferior to that of Quaresmio. The second ground-plan*) mentioned above, drawn by Giovanni Pietro Fabbrone, is very large (about 5' long and 1½' broad); the execution is rather rough, though, at all events, original; however it would have been much better, had it been merely an imitation of Quaresmio's.

Enriched in some degree by the seventeenth century but very slightly by the eighteenth, we enter the nineteenth century in which a clear scientific comprehension of the subject is at length established. We hardly believe our eyes when we contemplate the plan of the highly cultivated Englishman *J. S. Buckingham***). Verily, John Zuallart in the sixteenth century worked more conscientiously. The year 1818, in which the Bohemian physician and naturalist *F. W. Sieber* visited Palestine, forms a turning point. As we are told in his *Journey from Cairo to Jerusalem* in the little work intended also to explain his previously published plan, at the very first glance at the environs of Jerusalem, this writer was struck with the strange discrepancies and incorrectness of all the existing plans, and he felt so keenly the desire to produce a plan which should form a more reliable basis for the study of a subject which cannot be considered as unimportant in regard to topography and geography, that he even endangered his life in the attempt. „During the most intense heat” he constructed „circular views on every important point of the hills and mountains by means of levels taken of all the prominent points visible”, and afterwards intersected these by radii drawn from the summit of the highest terrace of the Latin monastery of St. Salvator as his central point. In drawing his views, Sieber was surprised at the correctness and distinctness of the intersecting lines, taking into consideration the „exceeding imperfectness” of his instruments. He measured about two hundred points „geometrically correct”, and also determined, according to his own saying, the course of the Kedron, the circumference of the city-walls and the situation of the great mosque and other smaller ones. In this way he constructed a plan which was much approved, and was accepted everywhere. The artistic execution of this map is indeed superior to that of the earlier plans, the treatment of the ground is somewhat more careful, and the plan is a simple ground-plan; but we must not allow ourselves to be tempted by this superiority of artistic treatment, to withhold the just sentence that, independently of these advantages, Sieber's plan is very little superior to the better ones from the sixteenth and seventeenth century. If we look at the configuration of the ground, we see here also arbitrariness prevailing; in the valley of „Gihon” a stately brook flows from the birket Mamilla, and in the valley of Josaphat there is another flowing from birket el-Hejeh and the akabeh es-Suân, both uniting opposite to the northeastern angle of the city. If we look at the direction

*) „IERUSALEM hodierna. G. Balth. Probst, haer. Jer. Wolff. excud. Augustae Vindel”. It bears no date, but is, no doubt, from the last century, altho' the Italian original may belong to an earlier period.

**) Appended to the „Travels among the Arab Tribes”.

of the ring - walls of the city, we find that it is more correctly given in De Angelis' and Zuallart's plans; for from the Yâfa-gate it runs in a pretty straight line westward and then from the northwestern angle towards N. N. E. The outlines of the city being given in this way, it is self-evident that no regular net of streets can be drawn within. The area of the northwest division (the old latin quarter of the eleventh century) is much too narrow, at least north of the hâret dêr el-Franj, and the hâret el-Khânkeh. Besides this, not only are many streets wanting — not to speak of the *culs-de-sac* — and the course of many others faulty, being in several cases more especially too straight; but here and there a supernumerary street has been introduced. Among the streets we miss more especially the regular line from the Damascus-gate southeastwards under the name of hôsh Akhîa Bêk and southwards towards the Haram esh-Sherîf under the name of el-Wâd, on account of which error great confusion prevails in this quarter; the northeastern division (hâret bâb el-Hotta) Sieber might have drawn as well without ever having seen Jerusalem. While, on the one hand, many streets are sought for in vain, there is reason, on the other hand, to deplore that the polygon in which the dshâma el-Kurami is situated, is intersected by a street which did not exist, at least in 1846, and that four streets over and above the real number connect the sûk es-sîagh with the sûk el-attârîn. In a word, the plan of Sieber, as I have experienced, proves itself to be a very unreliable guide to the streets. Sieber's attempt was soon followed by others. The plan drawn up by *Westphal*, a surveyor, and Dr. *G. Parthey*, (1823) is praised as greatly superior. The Italian Engineer *Giovanni Failoni* at least introduced correctly in his plan, which is quite independent of that of Sieber, the street in the valley which leads from the Damascus-gate as far as sûk bâb es-sinsleh; otherwise his production must be reckoned, even in point of external finish, among the more inferior (1827). In 1828 *A. M. Jahn* published, in his account of his pilgrimage, a plan which is evidently borrowed from the seventeenth century, altho' the author (373) asserts that he obtained it from the ecclesiastics in St. John's, who had themselves drawn it (copied it) several years previously, and had published this somewhat peculiar looking plan simply such as it came into his hands. It is not provided with a scale and only with 31 figures (references). The alterations introduced, five or seven years later, into the plan of Sieber by *F. Catherwood*, who favoured by particularly fortunate circumstances, gained admission into the „Haram esh-Sherîf”, and was enabled to take surveys during several visits there, are principally limited to the Moslem Sanctuary, regarding which he enters into several details, to the adjoining streets together with the „birket es-Seraîn”, to trifling matters in the configuration of the ground, and to the use of an unpublished survey made by *J. J. Scoles* in the year 1825. If it be acknowledged that Catherwood has some merit in having given a clearer representation of the area of the great mosque and its immediate environs, it must not, on the other hand, be concealed that his works are not in all respects worthy of unlimited confidence, but that they must be

used with caution. Very lately this plan, probably because no better was known, has been reproduced in France*), a proceeding which was at all events better advised than if, on account of national predilections, the very hasty sketch of Count *Joseph d'Estourmel*, who, like Catherwood, visited Jerusalem in 1833, had been made use of. In 1838 already the active American investigators *Edward Robinson* and *Eli Smith*, assisted afterwards by the Chartographer *Heinrich Kiepert* of Berlin, began a revision of the Sieber-Catherwood plan. The new materials collected were not indeed considerable; but they, at all events, sufficed to determine the distances from one gate to another more exactly, and to indicate correctly the direction of the wall from the Yâfa-gate to the northwestern angle of the city, that is to say to run it northwest; but we are obliged to add that, at the same time, the portion of the wall thence to the Damascus-gate only became the more faulty. In making use of Dr. Westphal's plan, it was ascertained that angles between the two extreme points of the eastern wall of the Latin Convent, nine-mosques, the Church of the Sepulchre and several points of the city-walls, had been measured very accurately with a sextant, to within a few minutes, by which means the situation of several points, and more particularly that of the convent, was more accurately ascertained**). Robinson himself also measured a base northwest of the city, from the extreme points of which the angles of the westernmost point of the city-wall and of the dome (probably the eastern) of the Church of the Resurrection, were taken etc. In consequence of drawing further inward the portion of wall from the Yâfa-gate to the northwestern angle, the internal dimensions became smaller; in the northeastern division the dotted lines of the squares of streets were left out. Besides this almost nothing was changed in the interior of the city, be it in regard of the Haram esh-Sherîf, the buildings or the streets. Tho' not without the incitement of a hypothesis, more was done for a better representation of the *terrain*, more especially in the city, where, if we leave Pococke's plan out of consideration, and also a perfect hill very nearly in the centre of the northwestern division and a slope in the northeastern part of the Jewish quarter, the same had until then been entirely disregarded. Here, as also in Pococke's plan, we see distinctly the valley which divides the city into a western and an eastern half, tho' its rise is not regularly indicated. The Tyropœon of Robinson, that is to say a ravine falling from the Yâfa-gate directly eastwards into the former valley, has been drawn so distinctly — as was indeed the case on Pococke's plan also — that, according to the drawing, one would have to ascend considerably northward from the southern extremity of the hâret en-Nassâra as far as the akbet el-Khadher, and likewise in the three sâr running parallel to one another, an ascent which is not, however, perceptible on the spot. Improvements worthy of honourable mention

*) La Terre-Sainte et les Lieux illustrés par les Apôtres. Par l'Abbé *Gr.* et *A. Égdon*. Paris 1853. As I have not this plan at hand to compare with the pleasing plan of Jerusalem drawn by *A. H. Dufour*, engraved for „Three years in the East” etc., and published in Paris 1838 with *George Robinson's* „*Voyage en Syrie*”, I cannot judge whether they are identical, but so much I may venture to say, that they bear a strong resemblance to each other.

**) *Kiepert* in *Robinson's* „Palästina” I, LIII. (German edition.)

have been attempted to show the direction of the valley of Ben Hinnom from the pool of Mamilla to the well of Job (Nehemiah), and of the valley of Kedron to the same place, altho', it is true, the further course of the united ravines appears incorrect. Besides this the hatching lines of the hill are as unnatural as they are mannered. Nature produces nowhere anything of the kind as the artist has done here. As regards the Bethlehem aqueduct, Sieber and Catherwood traced it outside, east of the Dung-gate, through the Khatunîyeh and the southwestern angle of the area of the temple to the Judgment-hall; Robinson on the contrary, acting with greater caution, has led it in front of the synagogues only as far as the city wall. He has been followed, as to the most important points, by *Karl Raumer* (1850), without reference to the newest productions in planography. The institution of the Anglican bishopric and the establishment of new consulates have been so far advantageous that scientific men, zealously devoted to the progress of biblical geography, have assumed the part of the early industrious Franciscans, (who might serve as an example to those of the present day who rest too content with the bread of tradition) and surpassed them, carrying on researches on the spot and laying the results before the world. I allude to the English chaplain *George Williams* and the Prussian consul *E. G. Schultz*, whose activity has been put forward within the last decennium. I cannot, however, refrain from expressing my regret that both these gentlemen have not availed themselves of their favourable position to the extent that might be expected from *authors* who aim at restoration of truth. They rely mostly on Robinson, whose views otherwise they combat wherever possible, and they seem more especially to look to and to use their plans as a stage for the display of their archæological hypotheses. First, as regards William's plan, of which he himself indeed speaks with modesty, it is evident that in it some attempt has been made to correct the representation of the net-work of streets. He, like Failoni, has restored the correct immediate connexion of the „hôsh Akhîa Bêk" with „el-Wâd"; he has slightly improved the piece of net-work in the Armenian quarter nearest east of the citadel; the aqueduct he has traced correctly from the eastern extremity of the Jewish quarter to the bridge of the mosque (bridge of the temple, „sûk bâb es-Sinsleh"); the pool „es-Sultân", however, he has placed too far south. The configuration of the ground is given in much softer touches and, at the same time, not more incorrectly than in Robinson's plan. The carefully executed model of Jerusalem (Sheffield, May 1846, with a key to it 1847) constructed by *Edwin Smith* under the direction of *John Blackburn*, follows chiefly the works of Robinson and Williams, original observations and a small piece of the net-work of streets within the district of the Anglican church, surveyed by the architect *Matthew Habershon*, having however also been made use of. Afterwards Schultz, during his stay in Berlin in 1845, agreed with the able and learned *Kiepert* to construct a plan, and a large brilliantly coloured, and splendid edition indeed was thus brought out. What was wanting in intrinsic worth was to be supplied by outward splendour. However, fine colours do not suffice to give an appearance of truth to the frequently

incorrect drawing of the streets, with which the Consul ought to have become more intimately acquainted during his long sojourn in Jerusalem. Of the delineation of the *terrain* pretty nearly the same may be said as of that of Williams; it is evidently superior to Robinson's, altho' the hill represented in the northeastern corner of the city, is nothing more than a creation of the imagination. In this plan, however, we come more into contact with Arabic life, or with the life of the natives; frequently we find the Arabic name at the side of the German one; and in some instances they are quite new, as „Kasr Jalûd”, „Abrâj Ghazzeh”, „Jôret el-'Aneb”, „el-Khadher”, „Abu Wa'ir”, „Kasr el-Asfûr”. The profile drawn through Jerusalem from W.S.W. to E.N.E., is also very pretty and instructive. This plan has been copied with a selection of explanations by *Louis Énault* in his work „*La Terre-Sainte*” (Paris 1854). Until the time of Robinson, the plans seem exclusively to have been constructed not for the purpose of giving a comprehensive view of the city and the surrounding country, but in order to bring the „Holy Places” more distinctly before the eyes of the spectator, that is to say not so much for the gratification of biblical students and enquirers, as for that of believing pilgrims. Robinson constructed his ground-plan in the interest of biblical archæology, and thus struck out the greater number of traditional points which Schultz, however, again admitted. The ground-plan of *Wilhelm Krafft*, a theologian of Bonn, has been constructed with a similar view to that of Robinson, but it gives no evidence either of a conscientious study of the streets or of the natural features of the ground, it being rather an embodiment of his conceptions of ancient Jerusalem as expressed in his topography. Other plans, such as those of *L. C. Grimm*, of *W. R. Wilde* and of *W. H. Bartlett*, I will merely allude to.

Thus stood matters when in the year 1849 appeared three new plans, quite independent of each other, and all with a new net-work of streets, viz. that of Lieutenants *Aldrich* and *Symonds*, with explanations by George Williams, that of the candidate for orders *H. Gadow*, and my own. It was after the fall of Akka, that English engineers availing themselves of the favourable disposition of the Turks who for once felt grateful towards the English for this military exploit, travelled to Jerusalem to take a geometrical survey of the city and the environs. The work was begun on the 25th February 1841 by the two above named officers, who were assisted by six engineers. Aldrich made use of a theodolite of 5½ inches, and a chain 100' long, for the survey of the surrounding country; and Symonds employed Schmalkalder's compass for the survey of the interior of the city; but he assisted the former when attacked by illness, in so far as he sketched the ground immediately surrounding the city. Colonel *Alderson* himself took a survey of the fortress. Their work lasted not less than six weeks, and the result is known to me, not only through Williams' edition, which is certainly not faithful and reliable on all points, but also through the copy which Mr. C. W. M. van de Velde took at the Board of Ordnance in London. When informed that so great a number of engineers unitis viribus have employed so much time in constructing a ground-plan, one

cannot help feeling favourably predisposed towards it, and naturally inclined to the belief that no errors, or at least no important errors, could have found their way into it. In the original at the Board of Ordnance, the city and the surrounding country must be held distinct. In the latter we see a net of angles, which renders it evident enough that the chief points have been correctly determined by means of triangulation, as for instance the summit and the dome of the ascension on the Mount of Olives; the spot where Christ is supposed to have wept over Jerusalem; the church of the tomb of the Virgin; the northeastern anglé of the city; a point between this and the pool of the bath of Mary; the column of Mahomet in the eastern wall of the „Haram esh-Sherîf”, the southeastern angle of the city; a point somewhat southwest of this; the tomb of Zechariah in the vallèy of Kedron; the summit of the „Dshebel Baten el-Haua”; (from the latter) „en-Neby Dâtûd”; the Sion-gate; the projecting angle between this and the Dung-gate; as also the point of junction between the valleys of Josaphat and Hinnom; the well of Job (Nehemiah); (from this) the „Jebel deir Abu Tôr”; a point southwest of „en-Neby Dâtûd”, above the valley, westward by the side of the Bethlehem road; another somewhat south-southwest of „Mâr Jiris”; (hence) the western-side and southwest-angle of the city; (from the latter) the Mamilla-tombs somewhat northeast of the pool; the north-western angle of the city; (from this) the Damascus-gate and the rising-ground between this and the cave of Jeremiah; the hill above this; (from this) the eminence between the Mamilla-pool and the convent of the Holy Cross; several eminences northeast of Jerusalem; the „Râs es-Sowêka”, and the watershed in the vicinity of the tombs of the Judges. In the interior of the city it is otherwise; here no square measurements have been made, and, in consequence, no strictly correct survey took place. From the memoir of Williams which accompanies the plan, we also learn that the English engineers never put their foot in the „Haram esh-Sherîf”, in order, as it is circumstantially stated, not to wound the religious susceptibilities of the Mahomedans. I may add to this that they did not even always approach near enough to it. From what here has been stated, it will be seen that the delineation of the environs may be relied upon, fixed geometrical points having been found, and that herein consists the chief, and by no means insignificant, merit of the Englishmen, but that the correctness of the interior of the city requires to be further tested. As for the delineation of the *terrain*, this deserves in general commendation, yet it ought not to be passed over in silence that the delineation is not so distinct as the art of the present day is capable of making it. In more than one place it is, if not difficult, at least not easy to distinguish whether a depression in the soil or an elevation is meant. Without even taking into account the portion situated outside of the city, I maintain that the Wâd is by no means drawn distinctly enough. The little valley in the „sûk hâret el-Yehûd” is wanting. If a regular hill immediately northeast of the Damascus-gate, north of the quarry, be meant to be drawn, it does not exist. The hill east of the church of the ascension, which bears the Wely, is marked too sharply. Passing

on to the interior of the city, one is at once struck by the appearance of two angles projecting westwards from the western side and the southern third of the temple area, the northernmost of which angles is immediately south close to the „bâb es-sinsleh”. These angular lines are incorrect. Catherwood, who may be supposed to have had the most perfect knowledge of the Haram esh-Sherîf, drew the western side straight. Proceeding from the place of Wailing along the western wall of the Haram, which runs straight from south to north, I came into a court about thirty feet long, then under the „Mahkameh” to the „birket el-Obrâk”, which beyond, and north of, „sûk bâb es-sinsleh” extends, running south to north, a length of 83', and the eastern wall of which forms the western wall of the temple area. As to this point, I am quite certain that, contrary to the plan, the western side runs straight south and north. The southern projection is equally false, as I have learnt from ocular inspection, and as it is distinctly shown by *Ulrich Halbreiter*, in his representation in the middle part of leaf II. The same is maintained by Ed. Robinson, Bartlett and recently by Joseph Francis Thrupp *), so that it is not possible to doubt it. This essential misrepresentation has, however, been the principal cause of a series of errors. The south-side of the Haram is given correctly in round numbers at 900' (more exactly 927'); but in consequence of the projections, extending on the west-side to a distance of 260', first the Haram becomes too broad further north (close to the bâb es-sinsleh, in round numbers 1150' instead of 940'), and secondly, in consequence of this erroneous pushing forward of the temple area westwards, the space between this and the western city-wall, which, being a fixed object, could not be altered, is contracted. This leads us to a nearer consideration of the net of streets. In consequence of the necessary contraction of space, the corresponding streets, running west and east, have been shortened. This curtailment is especially striking between the „hâret en-Nassâra” and the „sûk es-semâni”. Williams could but scantily trace the church of the sepulchre, including the chapel of St. Helen, in the square south of the „hâret el-Khânkeh”, and made the wall of the sepulchral rotunda border upon the „hâret en-Nassâra”, while there in reality this rotunda is not visible, tho' buttresses are to be seen, which, belonging to another building, once afforded protection to the palace of the Latin Patriarch of the crusaders. The truth is, that there are between this street and the sepulchral rotunda in the first story several rather large rooms, in which the corn, brought in by the Fellâhîn as tithe or the like, are measured under the superintendence of the pasha's clerk, and then stored up, and that the second story is occupied by a long, lofty and entirely empty gallery, which is connected on the north with the house of an êfendi, while the blind wall on the south-side adjoins the buildings of the large Greek monastery, comprising kitchen, mill &c. In the map of the engineers the „hâret el-Khânkeh”, not including the breadth of the „suk es-semâni” and the „hâret en-Nassâra”, measures 350',

*) *Antient Jerusalem*. Cambridge 1855, p. 296 in note.

while, according to my original sketch, it measures 219 steps, and according to a measurement which was kindly sent to me from Jerusalem in 1855, it measures 463 English feet — a considerable difference, and a difference which I account the greater, because, according to the erroneous curtailments of the English plan, the description of the Anastase and the Basilica of Constantine together with the Propylæa as described by Eusebius, could not be correctly explained, as may be seen, for instance, in *Robert Willis'* „Architectural History of the Church of the Holy Sepulchre”, which distinctly mentions 360' as the length of the street alluded to (p. 109). The same may be said of the „hâret el-Bisâr”. The dimensions immediately east of the „hâret deir el-Armen” and of the „Maukaf” (the Citadel square), are also too short. According to my original sketch, the „hâret el-Armen” or the street which borders on the north the Armenian convent as far as the „hâret deir es-Siriân”, measures 151 steps, without including the intervening space, stretching from south to north, whereas the English plan shows only as many feet. Not less strikingly crippled, as it were, is the „hâret Yakubîyeh”, north of the protestant Christ Church. Consequently, were any one, in reliance on this ground-plan, executed under particularly favourable circumstances by a company of professional men, to undertake to draw inferences from this quarter as it is delineated in the plan for the purposes of scientific argumentation, it would be inevitable to commit many errors. To this must be further added that several streets are wanting, or are traced in a wrong direction. In this case it may perhaps be said in excuse, that it was exactly in the interval from 1841 to 1845, that the alterations in the net-work of streets took place, which were to be marked on the new plan. I remember, indeed, that in 1846 when the Anglicans were building their Christ Church, they suddenly gave to the „hâret Yakubîyeh” another direction, so that I was obliged on this point to alter my plan, which in 1845, at least as regards the upper part of the street, agreed with the English one. However, I do not attribute the omission of many streets in Symonds and Aldrich's plan exclusively to the changes that have been made in building, but also to the want of proper attention having been given to the smaller, less frequented and striking streets, and more especially to the *culs-de-sac*. I confess that some small streets would have escaped my notice, had not my long sojourn in the Holy City led to a more intimate knowledge of them. But I now pass from generalities to particulars, and have to announce that several streets in the Jewish quarter, the *cul-de-sac* eastwards near the English hospital, another between the „hâret deir es-ssêtûneh” and the „hâret el-Jawâîn”, the „hâret deir es-sultân”, and a few in the „hâret el-Moghâribeh” are missing. The street by the windmill, given as forming a thorough-fare to the „hâret deir es-ssêtûneh”, is incorrect, at least as regards 1845; between the „sûk el-lahem” and the „sûk el-attârîn”, there is a cross-street too many, while, on the other hand, the square of the „Khân es-sûk” is wanting; the „akbet el-Khadher” does not run northwards from the street of the Church of the Holy Sepulchre into the „hâret en-Nassâra”, but twelve steps south of it; close to the Ecce-Homo arch there is a cross-street,

and the street which runs from the „tarîk Sitti Mariam” to the northwestern angle of the temple area, does not commence so far westward. The street south of the Damascus gate is too narrow and, upon the whole, somewhat confused. The „birket hammâm el Batrak” ought to be drawn as an oblong square. The mouth of the upper part of the subterranean channel is traced much too far south of the Dung-gate, and the course of this channel, which forms a curve towards the east, is also given incorrectly. In inserting the proper names of places, Williams has followed a very peculiar plan. He did not ask the natives for information, but selected a mixture from the times of the Jewish kings, from the period of the crusades, from the year 1495 (Mejîr ed-Dîn), and from modern times; besides this, the selection of characters is often such as must necessarily lead to confusion, or must render it difficult for the uninitiated to understand the plan. This plan was soon made generally known in Germany by the celebrated geographer *Karl Ritter*, who left out a number of names and inserted a few others from my plan, and, moreover, with the help of H. Lang, partially improved the *terrain*. Then followed the physician *Chas. F. Zimpel*, with a ship-load of archæological nonsense, and with the incorrect additions that the „Wâdy en-Nâr” south of the „Jebel Baten el-Hawa” is traced from west to east instead of in a southeastern direction. That both these Germans have abandoned the guidance of the English engineers, and followed that of older planographers in tracing little brooklets in the ravines of Ben Hinnom and Josaphat, must be pointed out as a retrograde step. In Holland the circulation was promoted by *C. W. M. van de Velde* after the original measurements of the British military engineers Aldrich and Symonds, and „met verbetering van den Z. W. hoek der muur van den Haram el-Sjerîf” (1852)*. This improvement on the west-side of the temple area, which necessitated other improvements in the net of streets as far as the western wall of the city, but which, for want of knowledge of my measurements, have been attempted arbitrarily or at random, balances the faulty delineation of the configuration of the ground.

Gadow, who spent about one year (1846/47) in Jerusalem, made it his particular object to draw a correct plan. The fruits of his endeavours appeared on a reduced scale in Dr. Philipp Wolff's *Travels in the Holy Land*; and was needlessly copied, without mention of the original, by Dr. *Fr. Liebetrut* in his „*Reise nach dem Morgenlande*”. The plan in question, which is devoid of a scale, gives evidences of considerable degeneracy in the drawing of the ground, even appearing in the somewhat coarse execution, which may probably, however, be owing to the lithographer. In the city the ground was omitted, and as regards the ground in the environs, it is sufficient to know that the ravine beginning at the Dung-gate, is drawn exaggeratedly broad and in a straight line southwards, the same as in Pococke's plan, so that, according to this, the Dung-gate would command a view of the whole length of the

*) Reis door Syrië en Palestina. Utrecht 1854. See the plan in vol. 2, p. 231. Also in English and German.

narrow passage as far as the southern slope of the valley of Ben Hinnom. On the other hand, the direction of the wall, from the northwestern angle of the city to the Damascus-gate, has been improved by being pushed outward to the north, as is likewise the case in the plan of the British engineers. If we further examine Gadow's plan, we find indeed that he does not repeat the fault of broadening the area of the great Mosque at the expense of truth, and contracting the area between it and the western city-wall; but the streets are incomplete and not to be relied upon. Thus about half the streets are wanting in the Jewish quarter, as also in the northwestern division of the city from the „hâret el-Khânkeh” and „hâret deir el-Franj”; and the group of streets in the basâr is also faulty. Of the *culs-de-sac*, which are so numerous, and which form so striking a criterion in regard to the ground-plans of oriental cities, only about four are inserted. In addition to this, the direction of the streets is much too straight or too stiff and regular; the one that leads into the „hâret el-Moghâribeh”, commences incorrectly east (instead of west) of the steps of „el-Wâd”. In the citadel not all the towers are given. Otherwise it may be called a bright idea, to mark all the remains of ancient buildings in deep red colours. This plan has required more detailed criticism, because it is likely to commend itself by its independance, and because Karl Ritter, and also, on the recommendation of Professor Tuch of Leipzig, the German Oriental Society has undertaken to patronise it, and has long ago promised to publish it, tho', for reasons which are perhaps not purely financial, they have not as yet fulfilled this promise. Should the publication ever take place, I sincerely hope that the great original may in many respects differ from its unfortunate forerunner.

In constructing my own plan, I gave the most minute attention to the configuration of the ground within and without the city. I was the first who put in the little valley in the „sûk hâret el-Yehûd”. The course of the Tyropœon and the „Wâdy en-Nâr” I was enabled to determine more correctly by means of measurements. On the south-side of the „Wâdy er-Rabâby” I have likewise introduced the remarkable ancient Jewish sepulchres according to measurement, and have numbered them in accordance with the numbers in my description (*Topographie* 2, 237 sqq.), a measure which seemed to me absolutely necessary, if the confusion which has hitherto existed, were to be put an end to, and the guide to be made easily and perfectly comprehensible. On the other hand, the tracing of the city-wall from the northwestern angle to the Damascus-gate is faulty, according to the precedent of Robinson, whom I believed to be correct on this point. When indicating the net-work of streets in the space encircled by the city-wall, I soon discovered that the area was too confined there, so that I was even obliged arbitrarily to carry the wall a little outwards towards the north in order to avoid making the streets, inserted in the neighbourhood, too contorted; but to carry the wall outwards did not suffice, so that not only this portion of the wall, but also the streets in the neighbourhood, in some cases, have obtained a false direction. Altogether I would not so much

hold up to view the streets as being correct in direction beyond any further doubt, as I would point out the completeness of the net-work, a completeness which has not, to my knowledge, been attained in any other existing plan. I visited all the streets, in the course of my last journey, also those in the neighbourhood of the area of the great Mosque. As regards the proper names of the squares, streets &c., I have spared no trouble to learn them from the lips of the natives. The erroneous opinion that the streets had no names, seems to have prevailed pretty generally. Mejîr ed-Dîn, as is well known, quoted a number of names. Is it likely, then, that the people should, in the course of ages, have abandoned all names? This is not conceivable. In like manner as necessity originally called the names into existence, it continued also in after times to require the streets to be designated by one word and without loss of time. At the time of the crusaders we find that a regular list of names already existed. When in 1187 the Saracens drove the Franks out of the Holy City, the language of the Franks was also obliged to give way, and but few Latin or old French (most likely principally Provençal) names seem to have been translated into Arabic, nor is it probable that previously the Arabic names had been frequently translated into French or Latin. However, the ancient Frank „vicus David” corresponds with the present „chot en-Neby Dâûd”, as does the „ruha balneorum Pâtriarchæ” with the present „Batrak” (and also the hâret en-Nassâra), and the „vallis” with the present „el-Wâd”. The names of the gates have been maintained in greater number. We also observe, in regard to these latter, that the names given by the natives are more long-lived than the others; for among the Arabic names of the gates known to the crusaders, such as „bâb el-Mihrâb”, „bâb âmûd el-Ghorâb”, „bâb el-Asbat”, „bâb er-ahmet”, „bâb es-Ssaihûn”, all, with the exception of „bâb el-Mihrâb”, which tho’ antiquated, nevertheless occurs in Mejîr ed-Dîn, are still extant, while „porta David” has been changed into Yâfa-gate &c., „porta S. Stephani”, into Damascus-gate, porta Magdalenæ*), into Herod’s-gate, „porta vallis Josaphat”, into Stephen’s-gate, and only the golden gate and Sion-gate have remained. It is much to be deplored that a list of the Arabic names of the streets at the period of the crusades has not also descended to us, so that we might compare it with the existing one from 1495. But to return, the necessity for having names to the streets must, I know, exist now as it did previously, and by reading the writings of Scholz and Berggren, by repeatedly enquiring of the natives, also by interrogating once in presence of the deceased Mr. Schultz his Arabic teacher, a shêkh, I, at length, succeeded in collecting a considerable number of proper names, in regard to which I am only surprised that a greater number of the Arabic names from the fifteenth century, have not been retained in the popular language, and that some of them that have, should be so corrupted. I consider the mention of as many proper names as possible, very essential, because they are of great service in the description

*) *Muratorii Ital. Rer. script.* 6, 796. *Porta della Maddalena. Hist. Patriæ Monument. scriptor.* Aug. Taurini 1848. 3, 1125.

of details, and more especially on occasions of scientific digressions, as they serve to give correctness and distinctness to the expressions. The distrust which has been provoked*) against my list of names, I conceive to have its origin in the fact that this treasure of Arabic words had not been dug out to any considerable amount before my time, and the great number offered to the public by me, has caused surprise; probably, however, this distrust will gradually be dissipated when it shall be recalled to mind, that my collections correspond here and there with the traditions of Mejîr ed-Dîn, and with the collections of Scholz and Berggren, besides others. I was careful not to extort from guides names of their own invention, and if now and then the spelling should not be the most correct, or the name should be somewhat far-fetched and uncommon, I nevertheless venture to maintain that, upon the whole, the proper names are reliable to an extent which must render them very valuable. Ought the names of the „Holy Places” to have been accepted on the authority of the monks? I did not hesitate to satisfy the desires of the pilgrims herein, more especially as this enabled me, at the same time, to facilitate the understanding of the ancient as well as the more modern books of pilgrimage. I have, however, on the contrary been purposely sparing**) of such palæotopographical names which, tho’ representing merely the suppositions of one or more individuals, form the chief adornments of many existing plans.

From this survey of the ground-plans it results that no single one thoroughly satisfies the claims made upon it. The older plans possess at present only a historical value, and many new ones, such as Sieber’s, Robinson’s, William’s, Schultz’s, Krafft’s, may be totally or partially set aside, except they be used merely for the better understanding of their writings. Even Gadow’s ground-plan may, without much inconvenience, be set aside. In Catherwood’s plan the temple area, more particularly in Fergusson’s edition, is as yet indispensable. But when the failings in the English plan and in mine be balanced against the many useful features, which, according to my judgement, both, but more especially the former, contain, it strikes one at once as highly desirable that a plan should be worked out combining the advantages of both, while avoiding their errors. This idea has not occurred to me only recently. When *Louis Erbe* in Stuttgart applied to me for guidance in the construction of a geoplasma of Jerusalem, I used my influence to induce him to combine both these plans; which combination was indeed accomplished to my great satisfaction, altho’ a geometrician would perhaps censure some parts of the copies transmitted to me, which did not yet contain the improvements of

*) In the Boston edition of his work (1856, vol. I, p. 267 sq.) *Robinson* observes: „Very few if any of them (streets) bear names among the native population. . .” „Our friends, who had resided several years in the city, and made frequent inquiries, had never been able to hear of any, except in a few instances.” Why did not these friends then, and why does not Mr. *Robinson* name these few streets?

**) See the announcement of my plan by myself in the „*Zeitschrift der deutschen Morgenländischen Gesellschaft* 5, 372 sqq.”, as also my article „Die neuesten Leistungen in der Planographie von Jerusalem” *ibid.* 7, 223, written already in 1851.

a later date*); the bee was only to extract the honey from both flowers. If the love of truth caused me not to overvalue my own production, and not to underrate the production of others, too much merit must not be imputed to me; no man who has once emerged from his narrow self into the great human totality, and who has at the same time retained, in an unprejudiced heart, a degree of healthy conscientiousness, could have acted otherwise. In the same way *Thrupp* (1855) — deviating from the example of the two above named Germans, who, as is not unusual in their country, did not give so much credit to German literature — amalgamated the Aldrich-Symonds plan and my plan in his**); and tho' the endeavours of this learned Briton deserve to be acknowledged — for he has constructed a net-work of streets selected, with just discrimination and without partiality, from both plans, avoiding, at least in a great measure, the faults of both, as, for instance, in allowing exactly 100' more to the length of the „hâret el-Khânkeh” than the English engineers — nevertheless greater completeness might have been expected and would have been possible after the given models, for instance as regards the deficiency in the number of cross-streets between „sûk el-lahem” and „sûk el-attârîn”, and altho' the little valley of the „sûk hâret el-Yehûd” is introduced, indeed, a little too distinctly in the neighbourhood of the city-wall — I say this, even tho' it be to the detriment of my hypothesis — yet the treatment of the ground leaves a great deal to be desired, in addition to which it must not be forgotten that the artistic supplement, in fact, serves principally to give a more distinct view of the author's very peculiar notions regarding ancient topography, for instance regarding Moriah and Sion. Recently (1856) *Ed. Robinson* has followed in *Thrupp's* footsteps. He also has combined the English plan with mine***), but he has carried off the prize in as much as relates to the very neat execution. As for the streets that occur in this plan, I cannot allow them to pass without censure, observing at the same time that the faults I have to censure, are not the same as in the plan of Mr. *Thrupp*. I would refer, for instance, to the opening of „Akbat el-Khadher” into the Christian-street, to the „hâret Yakubîyeh”, „hâret el-Bisâr” and the three parallel sûk. What the *brook* of Hinnom is meant to indicate, cannot here either be understood. If Robinson's description of the ground seems to be, or is, correct, we are surprised to find in a map, published in London by John Murray, a northwest *hill* and a northeast *hill* within the city, as on older maps, tho' contrary to truth, and we must from this draw the inference that the work has not been carried on throughout under Robinson's eye. Yet this very incorrect representation has been introduced by *Kiepert* into the schools in 1857. As a tribute

*) See my *Topographie* 2, 1011 sq.

***) Jerusalem. Based upon the English Ordnance Survey and on the map of Dr. Tobler; in the before named work „Antient Jerusalem.” It is through this English mediation that my plan has quite lately met with greater attention in Germany. See *Phil. Wolff's* Jerusalem. Leipzig 1857. Plan and p. 19.

****) „Sketch-map of Jerusalem reduced from the plans of Symonds and Tobler with many corrections”. This sketch is wanting in the German translation.

to the truth I must add that a ground-plan published in the same year by Crocker in Boston*), represents the ground — which, in general, differs materially — more correctly, especially also in the northeast and northwest of the city, so that no hills offend the eye in these portions of the city. For our own part, I have to state that in order to put into execution the idea which I have alluded to, the well known chartographer *C. W. M. van de Velde* resolved to undertake the technical part, and I would particularly draw attention to the manner in which the configuration of the ground is drawn by him. We went carefully over the ground together; we tested street after street, consulting anew my original sketches; and, as a matter of course, the fixed points in the plan of Aldrich and Symonds, according to the original in the Board of Ordnance, were most carefully examined, their surpassing value being fully acknowledged. As our ground-plan is not meant to be a theatre for the conflicts of partizans, nor a place of deposit for hypotheses, we excluded almost entirely all names of remote antiquity, hardly one of which, moreover, is undisputed, and also those from the middle age, contenting ourselves with forming out of the plastic and linguistic materials extant, as distinct and true an image as possible, such a one as will be most useful to a sober antiquarian, and with which he is most likely to be pleased best. In addition to this, we took no little pains to insert all that is most interesting among the recent discoveries and recent buildings. Thus the Anglican cemetery on Mount Sion, and the house for Austrian pilgrims, still in course of erection, will be found in the plan.

With much pains a map has thus been constructed which is equal to the demands of the present day, and which will, we trust, be as welcome to the intelligent pilgrim as to the scientific investigator, altho' we will not conceal that we sympathize with the latter in the regret he will no doubt feel, that in some places still more exact measurements and observations have not been made, so that the work might be unconditionally recommended.

Supplement. While the foregoing was in the press, I became acquainted with two new plans of Jerusalem, seeming to acquire attention. One of them is the large plan of *Ermete Pierrotti*, executed during the year 1855 and published at Genoa. The author, an architect and Engineer, stayed some time in Jerusalem for the purpose of constructing this plan. I have now the opportunity to test the correctness of it by going over the ground, and shall not thus be likely to fall into errors by criticising others. In visiting the town with the said plan in hand, I was soon

*) See among the four maps to accompany the Biblical Researches in Palestine of *Ed. Robinson* and *Eli Smith* (drawn by *Heinrich Kiepert*) the „Plan of Jerusalem, originally sketched from Sieber and Catherwood, corrected by the measurements of *Robinson* and *Smith*. The streets corrected from the plans of *Tobler* and the English engineers”, on a somewhat larger scale. The net-work of streets in the two plans is not quite alike, differing most in the „hâret el-Moghâribeh”. On the London plan the streets are drawn more completely and better, tho' exaggeratedly broad. It deserves to be noticed that both plans published as Robinsonian are from the same year.

ERRATA.

(These Errata occur not through the carelessness of the Author.)

Pag. 13, line 2 from bottom, for „sûr” read „sûk”.
” 24, ” 11 ” ” } for „Pierrotti” read Pierotti”.
” 25, ” 4 and 6
” 25, ” 10 for „except the house of the female Pope Johanna” read
 „except the house of the high priest Annas”.

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convinced that it has no claim, strictly speaking, of being considered thoroughly reliable. In three places thoroughfares are indicated where there are mere *culs-de-sac*. The three market-streets (bazaars) being, as far as I can recollect, incorrectly drawn on all plans hitherto published, I devoted full attention to their topography, and found that *Pierrotti* also has fallen into the common error, and that our plan alone is correct in these points. But I must acknowledge, on the other hand, that *Pierrotti's* plan shows several features more correctly.

There are also specially distinguished on his plan the residences of the Latin Patriarch, the Latin Nunnery, the Greek Convent, the residences of the English, Prussian, French, Austrian and Spanish Consuls, and the Offices of the French and Austrian steam-packets. The names of all places famous in Holy History, are carefully indicated, except the house of the female Pope Johanna, thus indicating the incorrectness of the site hitherto assigned to it.

With regard to the delineation of the hills and the configuration of the ground in general, the plan is very often inaccurate; thus, for example, near the *Mulawieh-Mosque* a considerable hill is shown, which I have looked for in vain and which, in reality, does not exist. The technical execution of the plan, in general, is not creditable, and the writing not well finished. Had the plan appeared with that of *Sieber*, it would have been much more valuable, and while we must give credit to the author for his work on account of its originality, we cannot consider him to deserve any praise for not having paid attention to, or availed himself more fully of, the labours of others. Plans and maps should be drawn in so clear, perspicuous manner as to be at once intelligible to different nations.

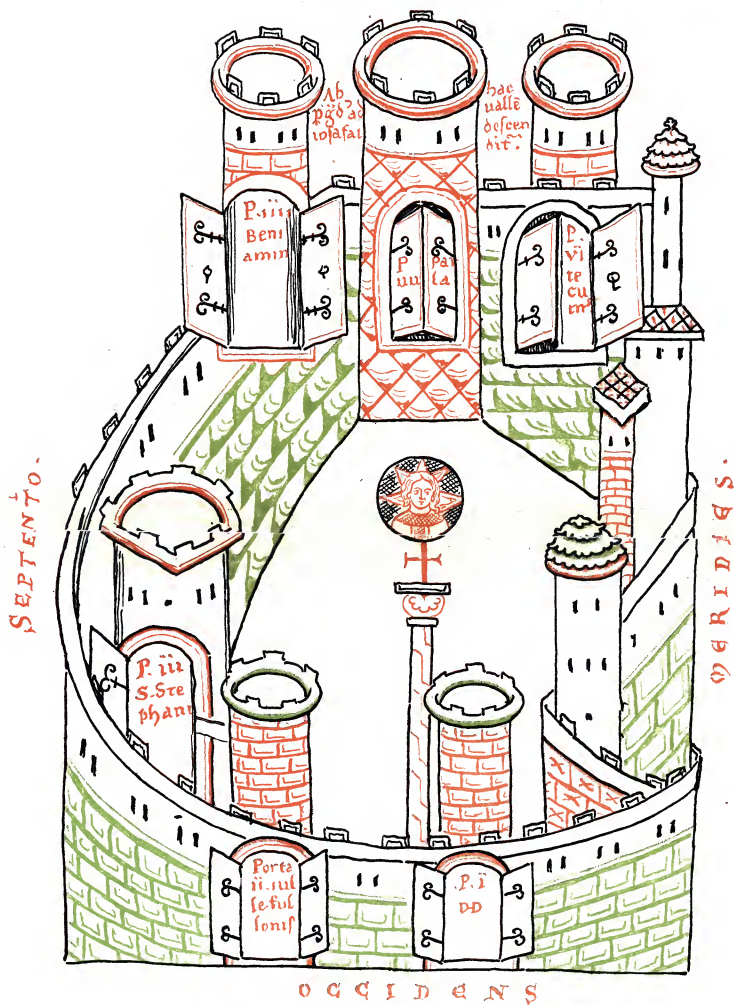
The other plan, that may be said to be of greater, and indeed of considerable importance, bears the title: „Jerusalem and Environs. From actual and minute Survey, completed on the spot and shaded from a verified Model by J. T. Barclay and Sons”, with a statement of the price, and the words: „copy right secured”, and has been published at Philadelphia (*Jas. Challen and Sons*) in 1856. This large plan is furnished with a scale and compass, and, notwithstanding its being tastelessly margined with an old-fashioned garnish, offers, in its new appearance, much that is of interest. No other plan represents the configuration of the ground more accurately; the rivulets of *Kedron* and *Ben Hinnom* are fortunately omitted. In the interior of the city the *Barclays* have drawn three hills: two in the south — one of them in the upper part (*Armenian quarter*), the other in the lower part (*Jewish quarter*) — and the third hill in the northeast. The latter, on the top of which there is the *Mulawieh Mosque*, ought to have been omitted; the two southern hills, however, are in accordance with my own orographical ground-plan, though I must say that they do not fall off so abruptly towards the south within the city, as they have been drawn. The outline of the „*Haram esh-Sherif*”, and, more particularly, of the platform on the top of the rock shows very distinctly the form of a trapezium, and the western side of the temple area runs in a straight direction. In no other plan the streets are drawn more correctly and completely;

the „hâret el-Khânkeh” has its due length. In the northwestern quarter of the city, however, which I surveyed myself anew in 1857, *three culs-de-sac*, that have 19, 20 and 25 steps in length, are omitted, while, on the other hand, the cross-street connecting the „akbet el-Khadher” with the by-street of the „hâret deir er-Râm”, northwest of the „birket hammâm el-Batrâk”, does not exist. For, with great conformity, it is neither found in the English plan, nor in Pierotti’s and my own. The three parallel sūk are almost perfectly correct. Names of places are but sparingly inserted, here and there they are scarcely legible, the Arabic is somewhat neglected, viz. „dier” instead of deir” or „dêr”; „en-Nair” instead of „en-Nâr, انار.” The technical execution of the plan is not quite satisfactory. However, the work deserves to be warmly recommended.

# ARCULF'S PLAN

I.

O R I E N S

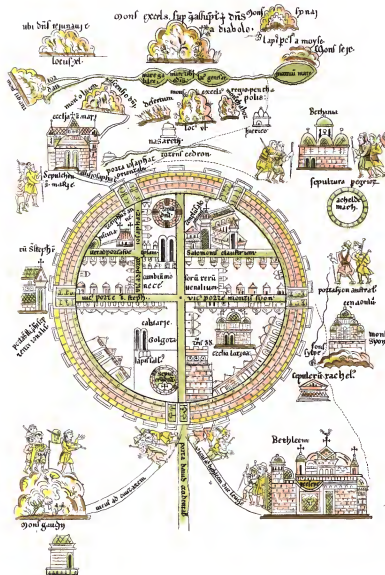






# PLAN OF THE XII. CENTURY.

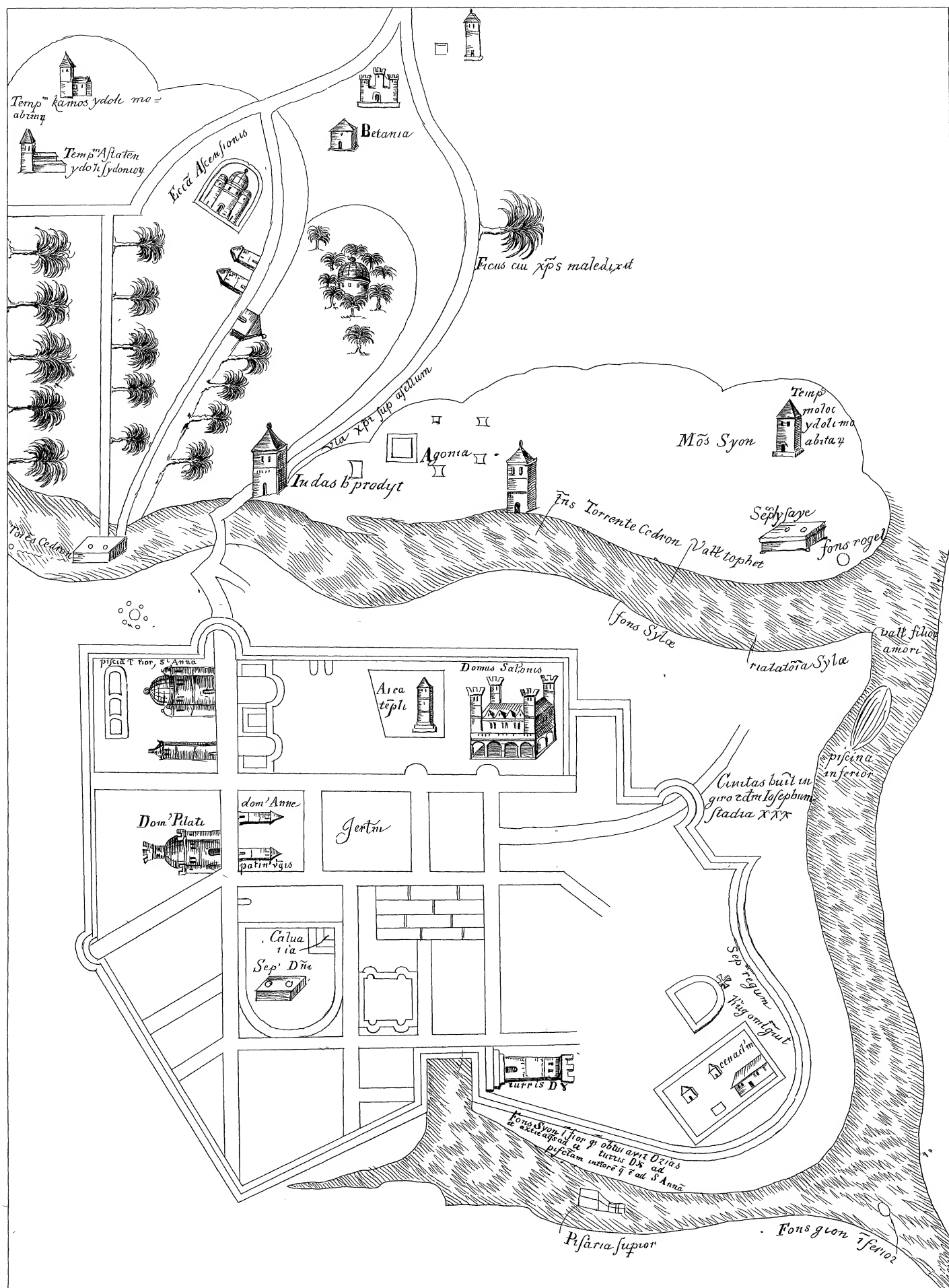
II.





## MARINO SANUDO'S PLAN.

### III.





## REFERENCES.

### Christian Quarter.

- 1 Convent of St. Euthymius
- 2 Deir es-Siti
- 3 House for Greek pilgrims
- 4 Traditional Sepulchre of Christ
- 5 Traditional spot of the Crucifixion
- 6 Isaac's convent
- 7 Abyssinian convent
- 8 Subterranean chapel of Helena
- 9 Latin convent
- 10 Armenian convent
- 11 Tower (steeples)
- 12 Courtyard
- 13 Here ends the Via Dolorosa, which begins in the Turik Sili. Mariam at Pilate's house, and goes down el-Wad, ascending Turik el-Khaim to Harat el-Khaim.
- 14 Porta Judiciae
- 15 Ancient remains of arches (Abd er-Rasch)
- 16 Melana convent
- 17 Coptic convent

### Mohammedan Quarter.

- 18 Deir el-Ade
- 19 Kce Hama' arch
- 20 Traditional spot where Simon took up the cross
- 21 Kanater Akhla Bek
- 22 Traditional house of Lazarus
- 23 Traditional house of Dives
- 24 Traditional house of Veronica
- 25 Suk el-kebir and esh-Shamain
- 26 Mahanab (Judgment hall)

- 27 Mideneh es-Sera
- 28 Oratories
- 29 High schools
- 30 Fatimeh Oratory
- 31 The celestial gate
- 32 Gate of David
- 33 Gate of prayer
- 34 Kubet es-Sakhrash el-Barranch
- 35 House of the chief shikh
- 36 Bab el-Kattinin
- 37 Bab el-Masara
- 38 Bab es-Sinash
- 39 Mideneh el-Kidhi
- 40 Bab el-Mogharrish
- 41 Mideneh el-Faheregh
- 42 Column of Mohammed

### Armenian Quarter.

- 43 Ancient tower
- 44 Ancient arch
- 45 Suk el-Khaim
- 46 Suk el-Yassirah

### Quarter of Mugharrish.

- 47 Jew's Walling place
- 48 Out side of the walls.
- 49 Traditional spot where St. Stephen was stoned
- 50 Traditional spot where Jesus smelt blood
- 51 Traditional spot where the Apostle's Creed was made
- 52 Traditional spot where the three disciples slept

### Explanatory notes.

- z signifies a mosque or minaret
- + signifies a Christian church, chapel or convent
- Mn means spring
- Akh't means ascent (street)
- Bab means gate
- Bir means well or fountain
- Birket means pool, tank or reservoir
- Chot II or Harat, Turik S. Sekkah mean street
- Jebel means mountain
- Mideneh means minaret
- Suk means market
- Turik = Harat = garden
- Wady means valley
- \* signifies houses or places not now existing or no more used for the purposes indicated.

# PLAN OF THE TOWN AND ENVIRONS OF JERUSALEM

CONSTRUCTED FROM  
THE ENGLISH ORDNANCE SURVEY AND  
MEASUREMENTS OF D<sup>T</sup> T. TOBLER

BY

C. W. M. VAN DE VELDE,

Late Lieutenant Dutch R. A. Chevalier of the Legion of honour.

With Memoir by  
D<sup>T</sup> TITUS TOBLER.

1858.

GOtha: JUSTUS PERTHES.

SCALE, Proportion of 1843.

0 500 1000 1500 2000 2500 English feet, 400 to an inch.

